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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/664,521 | 09/17/2003 | Orwic Antony Johnson | 20327-72849 | 4298 |

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INDIANAPOLIS, IN 46204

| EXAMINER |
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MCELHENY JR, DONALD E

| ART UNIT | PAPER NUMBER |
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2857

DATE MAILED: 09/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/664,521

Applicant(s)

JOHNSON, ORWIC ANTONY

Examiner

Donald E. McElheny, Jr.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09-17-03 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 04-05-2004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1, 5, 7, 8, 9, 10, 15, 16, 17, and 18 are rejected under 35 U.S.C. 102(a),(b) & (e) as being clearly anticipated by Murakawa et al. (4,981,353).

Note the section 4 meets the claimed “subterranean architectural feature”, and the both the control unit 9 and computational device 15 that processes the distance and angular sensors signals are the full equivalent and meet the claimed “processor”.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 4, 6, 11, 12, 19, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murakawa et al. (4,981,353).

While this reference does not teach the internal components of the processor and calculator components to include memory, and calculating a value before displaying such results, it would have been obvious to one of ordinary skill in the art, and even common sense to those unskilled in the art and vaguely familiar with computers and calculator processors that such devices contain memory for storing the variables for the calculations (taught to be performed by Murakawa) and that before one displays a result one must first make the calculation to make such value available for display.

5. Claims 1-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over any of the references to Ralston (6,094,625), Viney et al. (5,929,807), Julian (5,671,160), Bradshaw et al. (5,528,518), Kozah et al. (5,337,149), Wiklund (4,295,201), or Ohishi et al. (6,473,716).

As stated supra, the claimed invention is met by any of many notoriously well known prior art optical survey systems and their data gathering survey devices. This is especially true in light of applicant's own stated definitions and equivalents of what "features" may consist of and the equivalent uses of their claimed system (subterranean as well as above ground). Survey systems such as Ralston teach and show surveying pipes below ground level, and surveying trenches, which clearly meets the broadest definition of "subterranean" of being below ground surface level. But nevertheless it would have been obvious that these various survey systems could have been taken and

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used anywhere one desires to survey an area, including underground caves, tunnels, sewers, mines, etc., and that those systems making use of GPS for base home point measurements could have used notoriously well known pseudolites that exist for such very purpose of supplementing the GPS signal when it cannot be received such as in underground locations. Ralston, as well as all these other references, teach that all components may be housed into a common housing, contain angle and distance measuring sensors, computer processors for calculating the trig functions for various distances to objects, and may display the results to the user on location within the devices if desired, and that the measurements to objects may be any objects one wishes to take stock of and include in a survey. Thus one can take any of these devices direct it down a hole such as a sewer and make measurements to any type of object within the hole.

6. Other prior art is cited as teaching the various claimed elements, some for pipe measurements or underground region surveys.

7. Note that a "subterranean architectural feature", as far as defined within applicant's written specification, can be read on any subsurface feature or structure such as a trench bottom or components therein. But apparently it is met by any above ground surface feature or structure as well, as far as defined from applicant's written specification.

Note that applicant's written specification defines and states that the feature 50 is a "subterranean architectural features" and gives examples on page 12, then defines that feature 50 may also be a "non-architectural features" such as "a fixed point of

interest such as a fixed distance above a floor.” Since these are applicant’s stated definitions (which cannot be changed by amendment as such would be new matter from that of the originally filed application), then any theodolite, or optical/laser, based survey system used for site surveying meets the broad claims because “subterranean” becomes meaningless, and “architectural” also becomes meaningless, as defined by applicant’s specification.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donald McElheny, Jr. whose telephone number is 571-272-2218. The examiner can normally be reached on Monday-Thursday from 7:30 to 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Hoff Marc, can be reached on weekdays at telephone number 571-272-2216. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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A handwritten signature in black ink, appearing to read "D. McElheny, Jr.", written in a cursive style.

Donald E. McElheny, Jr.
Primary Examiner
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